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Review

Future delivery of the Drug Interventions Programme: Do the benefits justify the costs?

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ABSTRACT

The Drug Interventions Programme is an initiative employed by the Home Office in 2003 to integrate the Criminal Justice System with drug treatment services with the ultimate goal of reducing acquisitive crime. Drug Action Teams employ this scheme on a local level by providing a broad range of services for misusers in the community. Although much attention has been placed on societal gains, there is an added benefit in improving the health outcomes of those referred.

Opioid replacement therapy decreases illicit heroin use, reduces mortality and maintains contact with misusers allowing for psychosocial intervention. The Drug Interventions Programme provides direct access to such treatment in an otherwise high-risk and disengaged population. Anecdotal evidence of the programme is positive; with improved mental and physical health in offenders and a reduction in hospital admissions. However, monitoring health outcomes in offenders is challenging as long-term follow-up is difficult, poor compliance is an issue and coercive referrals may introduce a reporting bias.

Drug Action Team services are cost-effective due a lower consumption of health and social care and reduced offending levels. The Drug Interventions Programme has been successful in maintaining offenders in treatment and the Home Office claim its role in reducing crime is cost-saving. Future delivery of the initiative is at risk due to spending reductions, competing interests and a focus towards payment by results. Opposition to future implementation of the Drug Interventions Programme must be met with evidence for its effectiveness in order to ensure its continued investment.

1. Introduction

The prevalence of drug dependence in the United Kingdom (UK) is amongst the highest in the western world and drug-related harm underlies an increased morbidity and mortality in misusers.[1] In England and Wales, 1784 deaths occurred as a result of drug misuse in 2010 while there were an additional 6640 admissions of drug-related mental health disorders (2010/11).[2] Of over 200,000 individuals in treatment in England (2010–11), the vast majority (81%) use opiates.[3] Referrals through the Criminal Justice System (CJS) have become the second most common pathway into treatment (after self-referral).[3] Young offenders carry a considerably increased risk of death with standardised mortality ratios of nine- and 40-fold for males and females, respectively.[4] In the UK and other developed countries, policy aiming to reduce the societal burden of substance misuse is increasingly focussing on linking drug treatment services with the CJS.

In England, the Drug Interventions Programme (DIP) is an initiative employed by the Home Office in 2003 to integrate the CJS with community Drug Action Teams (DATs) with the ultimate goal of reducing acquisitive crime.[5] As of 2006, the scheme now includes various measures to improve retention in treatment, including sanctions for failure to attend assessment through the introduction of 'Tough choices'.[5] Levels of property crime, measured by the British Crime Survey (BCS),[6] have fallen since its introduction. Consequently, considerable expenditure has been invested in the DIP[7] and local funding has since continued.[8] Conclusive evidence as to the cost-effectiveness of treatment in DIP referrals is lacking; as few studies have looked at outcomes in offenders compared with self-referrals.

The programme targets individuals from the point of arrest and maintains a continuity of treatment throughout various stages of the CJS. Offenders testing positive for Class A substances are allocated a drugs worker and are referred for treatment under the supervision of a Criminal Justice Integrated Team (CJIT).[5] Community DATs manage individuals at various stages in the Criminal Justice process including those with Restrictions on Bail (RoB) and offenders with community sentencing orders. Services include

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opioid replacement with psychosocial intervention, needle exchange, vaccinations and testing for blood-borne viruses, referral to other care services and advice and support on social and welfare issues. The initiative has demonstrated relative success with the majority of offenders retained in treatment at 12 weeks (results obtained from the National Drug Treatment Monitoring System (NDTMS))[5] and reduced offending levels.[5,7] However, data has not been controlled for and is consistent with a decline in acquisitive crime[6] attributable to multiple factors established prior to its introduction. Grants allocated to local DATs have recently declined[8] and efficiency savings made during the transition of the National Treatment Agency for Substance Misuse (NTA) (a special health authority responsible for the allocation of central funding) to a local authority led national service, Public Health England (PHE),[9] risks effective future delivery of the programme.

Clinical services provided by community DATs have many benefits on a wider population level. They promote health by discouraging risk-taking behaviour in intravenous drug users (IVDUs); reducing transmission of blood-borne diseases. Opioid replacement concomitantly empowers misusing offenders by allowing service users to tackle their drug dependence in a controlled manner. Execution of DAT services via referral through the DIP provides direct access to various healthcare interventions in an otherwise high-risk and disengaged population. However, evidence of the effectiveness of drug treatment in such individuals is conflicting and is focussed on social, rather than health-related, outcomes.[10] The coercive nature of DIP referral may imply a lower level of self-motivation, a key indicator of clinical effectiveness.[10] Furthermore, offenders generally have more serious addiction problems which are less responsive to intervention.[11] The effectiveness of treatment in CJS referrals remains unclear, although previous studies have demonstrated similar outcomes in coerced clients compared with self-referrals,[12] while compliance in offenders (74 per cent after 12 weeks) is similar to that of non-offenders (76 per cent).[5] Hence, health outcomes of drug treatment may be no different to that of the general population and its effectiveness, even in a disengaged cohort, may be evident upon further evaluation.

Given recent changes to the organisation of drug treatment services in England, benefits of the DIP must be apparent in order to ensure its continued investment. In this article, the cost-effectiveness of the DIP will be discussed focussing on health-related outcomes. Current expenditure will be considered in relation to evidence of the clinical and cost-effectiveness of opioid replacement therapy with psychosocial intervention; the current basis of drug treatment in the UK.[13]

2. Clinical effectiveness

Prescribing and informal psychosocial intervention are the mainstay of DAT services in the UK. The National Institute for Health and Clinical Excellence (NICE) recommends either Methadone or Buprenorphine as first-line therapy.[14] Methadone maintenance therapy (MMT) remains the primary treatment for opioid dependence. Buprenorphine, a partial opioid agonist, is an alternative to methadone.

MMT significantly decreases illicit heroin use[15] while Buprenorphine is as effective using medium to high doses.[16] Use of illicit opioids is associated with risk of overdose in addition to various comorbidities including blood-borne virus infection and various mental health disorders.[17] A reduction in mortality for MMT has been observed, although this was not statistically significant.[15] Risk of death from overdose is significantly lower for Buprenorphine compared with MMT.[18] In addition, MMT significantly improves retention in treatment[15] allowing for psychosocial intervention. Buprenorphine, although superior to placebo, was statistically less likely to maintain patients in treatment compared with MMT.[16] On initiating treatment, choice of medication is based on prior maintenance therapy and patient preference14; although high-dose methadone has been recommended as the most effective treatment.[16]

Quality of Life has recently gained interest as an important outcome of prescribing services. Non-significant improvements have been demonstrated for MMT[19] using measures of physical health, vitality, psychosocial relationships, leisure activities, material resources, emotions and general well-being.[20] MMT appears to particularly improve psychological health[21] with significant improvements at one and two year follow-ups,[22] while Buprenorphine administration improves pain, vitality and social functioning domains.[23] From a service-user perspective, aspects of a good Quality of Life include personal relationships, psychological well-being, occupation, independence and life purpose.[24] MMT allows for social integration, emotional stability and employment[24] and, with strict adherence to treatment programmes and subject to annual medical review, driving ability may be re-gained in the UK.[25] Conversely, negative consequences of MMT include stigmatisation, discrimination, feelings of dependence and a restriction of freedoms.[24] Further studies should focus on population specific outcomes in order to reduce heterogeneity of Quality of Life measures.

Adjunctive contingency management (CM) is also recommended by NICE as an effective method of promoting recovery[14]; although uptake has been limited.[26] CM offers incentives for positive behaviours, such as testing negative for illicit drug use, in the form of vouchers and financial incentives in addition to extra privileges including take-home methadone doses.[14] It is an effective psychosocial intervention in substance abuse disorders; improving retention in treatment and use of opiates.[27,28] However, there is little evidence for its health-related benefits. CM significantly improved Quality of Life over a period of nine months in cocaine abusers with co-morbid alcohol dependence.[29] However, results of alternative substance use disorders cannot be generalised and longer-term follow up is needed.

An evaluation of the clinical outcomes of the DIP must rely on anecdotal evidence. In 2008, the DIP Strategic Communications Team collated evidence from communities across the country regarding their experiences of implementing the programme. A considerable improvement in health status, a decline in hospital admissions and modest improvements in the mental health of offenders was observed.[30] Over half of 35 clients experienced health improvements three months following DIP contact in the Wirral, while emergency visits to hospital decreased from 12 to one over a period of six months.[30] Poor quality of evidence for these claims must be acknowledged and surveys of larger populations of DIP clients are required. However, monitoring health outcomes in offenders is challenging as long-term follow-up is difficult, compliance with interventions is variable and coercive referrals may introduce a reporting bias.

3. Cost-effectiveness

Following its initial success, over £500 million was invested in the DIP between 2003 and 2007 with expenditure now continuing at a reduced level.[7] The majority of funding awarded through the DIP main grant is allocated to Criminal Justice drugs workers, with allowances made for management and other additional costs.[31] In 2012–13, more than £97 million will be awarded to local CJITs; paid jointly by the Home Office and the Department of Health (DH).[8] Resources allocated to treatment services have increased in order to deal with further demand through CJS referrals. This has

included approximately £300 million per year allocated to local DATs through the Drug Pooled Treatment Budget (PTB) and additional funds to primary care trusts (PCTs) and local authorities estimated at £200 million per annum.[7] Funding of treatment services in England is also overseen by the NTA; who received a DIP budget of just under £2 million in 2010–11 for management and operational costs.[32]

Quality-Adjusted Life-Years (QALYs) use cost utilities to measure the impact of an intervention on both length of life and health-related Quality of Life.[33] The EuroQoL (EQ)-5D questionnaire, favoured by NICE as a measure of health-related Quality of Life, includes mobility, self-care, activities, pain/discomfort and anxiety/depression domains.[33] QALYs allow for comparisons across different areas of healthcare and have been used in previous economic evaluations of substance abuse treatments. Additional cost per QALY gained by an intervention, the incremental cost-effectiveness ratio (ICER), is used by decision makers as an indicator of cost-effectiveness.[34] A threshold range of between £20,000 and £30,000 per QALY gained, valued by the general population,[33] has been employed by NICE for treatment recommendation.[35] For instance, an intervention with an ICER of below £20,000 is likely to be recommended based primarily on its cost-effectiveness, whereas treatments above this threshold may involve other contributing factors to the decision making process.[35] This is particularly important in substance abuse treatments as interventions have wider benefits to the general public including crime reduction.

After performing a meta-analysis of 11 previous publications, Connock et al. assessed the cost-effectiveness of opioid replacement therapy from the perspective of the National Health Service (NHS) and Personal Social Services (PSS).[36] Ten health states relating specifically to substance misuse were employed and Quality of Life was valued over a period of 12 months by lay members of the public. Societal benefits, including self-reported reductions in acquisitive crime and other CJS costs, were included. Longer-term health-related outcomes, as a result of a reduction in blood borne virus transmission, were not. ICERs of £13,697 and £26,429 per QALY gained for Methadone and Buprenorphine, respectively, were found.[36] Nonetheless, several limitations impede the interpretation of these results. These include; (i) the assumption that no drug therapy is equivalent to health status of participants prior to entering treatment, (ii) the absence of an evaluation of psychosocial alternatives, (iii) the use of utility values derived from a relatively small panel and most importantly, (iv) the characteristics of the populations on which this evidence is based (the majority of studies were performed without the inclusion of coercive programmes using the CJS and there were no UK-based investigations).

In 2007, NICE recommended that CM be introduced into recovery services.[14] Barriers to its implementation outside the US include its cost-effectiveness[37] and ethical justification. CM strategies only become effective in lengthening duration of abstinence at significant cost[37] while rates of service utilisation are not affected compared with standard care.[38] A shift towards 'incentive-orientated' services[14] has gained concern amongst both treatment recipients and providers.[26] Thus, implementing CM as part of services provided by DATs for DIP referrals is likely to incur significant cost with no evidence for any sufficient savings to health services.

From a service-user perspective, a recent survey of 95 DATs across England, as part of the Drug Treatment Outcomes Research Study (DTORS), has provided data on structured drug recovery following the introduction of CJS referrals.[11] Participants, of which over one-third were referred by the CJS, were interviewed during the initial 12 months of treatment. Self-reported estimates of health and social care, needle exchange and drugs advice, accommodation, childcare and criminal offending were valued according to established unit costs. Quality of Life was estimated using the short form 12 (SF12) questionnaire, a 12 item health survey which measures physical and mental health according to eight domains (general health, mental health, physical and social functioning, limitations due to physical and emotional problems, vitality and pain).[39] Utility weights were pre-determined by a sample of the general population. When compared with the expected costs of patient behaviours prior to commencing treatment, drug treatment services were associated with a lower consumption of health and social care, reduced self-reported offence levels and higher Quality of Life scores. Valuing one QALY gained at £30,000 the authors calculated an overall net benefit of £6527 with a cost-benefit ratio of 2.5:1 from an individual perspective.[11] Even at a lower willingness to pay, drug treatment is still likely to be cost-effective.[11] The results of this study under-estimate total expenditure incurred by current methods of drug rehabilitation as they do not include CJS costs of testing and referring patients under the DIP; hence, previous claims by the Home Office[7] may be exaggerated. However, broader societal benefits not accounted for may also be achieved, such as Quality of Life improvements in the general population from crime reduction.

Above an ICER of £20,000 per QALY, decisions on treatment recommendation rely heavily on the degree of uncertainty, the innovative nature of the intervention, the characteristics of the population and the wider societal impact.[35] Other authors have acknowledged that due to the nature of UK welfare system, the cost-effectiveness of substance misuse interventions relies heavily on a societal perspective.[26] In fact, in practice it may not be necessary to separate the health and social benefits of the DIP; given the additional role of DATs in providing welfare support and its combined interest from both the Home Office and the DH. In a cohort of over 7000 DIP individuals, offending rates decreased by 26 percent in the six months following positive testing, compared with client behaviours in the six month period prior to referral.[5] In the absence of a comparison, such figures may grossly overestimate the impact of the initiative. Even with recent rises in unemployment, levels of acquisitive crime continue to fall.[6] In addition, the Home Office claim a 20 percent reduction since the introduction of the DIP.[7] Drug-related offences had already been declining since the mid-1990s,[6] consistent with an overall crime drop possibly attributable to falling unemployment, better policing, increasing prison populations and improvements in security levels.[40] Hence, societal benefits of drug treatment are difficult to quantify as complex socio-economic factors impact on trends in acquisitive crime.

4. Future delivery of the programme

Financial pressures on public services will likely impact on drug recovery services. Grants allocated to local DATs have declined from nearly £103 million in 2010–11 to just over £97 million in 2012–13.[8] As a result, decreased levels of staff time with poor collaboration between health services and CJS agencies are expected.[41] As of April 2013, local authorities will be responsible for the commissioning of DAT services, overseen by PHE (an agency of the DH). A recent report compiled by an independent charity, the UK drug policy commission (UKDPC), has acknowledged significant risk to services due to a reduction in local spending and concern that local expenditure will be diverted to more 'deserving' areas.[41] Implementation of this change is also at risk due to NTA cuts in back-office expenditure[42] and smooth transition towards effective locally-led services is therefore unlikely.

As part of recent government reforms, DIP funding is set to become outcome-based.[9] Local Health and Wellbeing boards will

use data collected by local authorities and evidence provided for by PHE to inform decisions on its implementation.[43] Broad determinants of health will be included in a new public health outcomes framework. As reported by the Ministry of Justice (MoJ), re-offending levels are set to be a key indicator of local performance.[44] Prior DIP expenditure has been justified according to its benefits; the Home Office claim every pound spent saves at least £9.50 in crime reduction costs.[7] However, figures are based on self-reported data.[45] Successful future implementation of the DIP will therefore depend heavily on evidence for its effectiveness locally; particularly at a wider community level.

The new Drugs Strategy set out by the Home Office encourages Police and Crime Commissioners (PCCs), now in control of local policing budgets, to work with local authorities in driving health improvements through outcome-based funding.[46] However, the introduction of PCCs in England and Wales may alter resources allocated to DATs through non-ring fenced DIP funding[47]; due to competing interests, poor collaboration of healthcare and CJS agencies and a lack of accountability.[41] Increased flexibility given to local decision makers, in addition to a current culture of financial austerity and a lack of robust evidence, is a threat to the future delivery of the DIP.

5. Conclusion

The DIP decreases levels of acquisitive crime through a reduction in illicit substance use and various health improvements in offenders. DAT services are cost-effective and have a wide range of benefits at a community level. Reduced spending, competing interests and a lack of sufficient data will impact on future funding of the DIP. In order to ensure its delivery, opposition to its implementation must be met with evidence for its effectiveness.

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Conflicts of interest
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References

1. Department of Health. *Drug misuse and dependence: UK guidelines on clinical management*. London: The Stationary Office; 2007.
2. Health and Social Care Information Centre. *Statistics on drug misuse: England, 2011*. Leeds: HSCIC; 2011.
3. Department of Health. *Statistics from the National Drug Treatment Monitoring System (NDTMS)*. London: The Stationary Office; 2011.
4. Coffey C, Veit F, Wolfe R, Cini E, Patton GC. Mortality in young offenders: retrospective cohort study. *BMJ* 2003;**326**(7398):1064–7.
5. Skobdo S, Brown G, Deacon S, Cooper A, Hall A, Millar T, et al. *The Drug Interventions Programme (DIP): addressing drug use and offending through 'Tough Choices'*. London: Home Office; 2007.
6. Home Office. *Crime in England and Wales 2010/11*. London: The Stationary Office; 2011.
7. Home Office. *An introduction to the Drug Interventions Programme for treatment providers*. London: The Stationary Office; 2007.
8. Home Office. *Drug Interventions Programme. Grants to Drug Action Teams from 2007/08 onwards*. London: The Stationary Office; 2012.
9. Department of Health. *The transition to Public Health England*. London: The Stationary Office; 2011.
10. Farabee D, Prendergast M, Anglin MD. The effectiveness of coerced treatment for drug-abusing offenders. *Federal Probation* 1998;**62**(1):3–10.
11. Davies L, Jones A, Vamvakas G, Dubourg R, Donmall M. *The Drug Treatment Outcomes Research Study (DTORS): cost-effectiveness analysis*. London: Home Office; 2009.
12. Hough M. *Drugs misuse and the criminal justice system: a review of the literature*. London: Home Office; 1996.
13. National Treatment Agency for Substance Misuse. *Drug treatment in England: the road to recovery*. London: NTA; 2012.
14. National Institute for Health and Clinical Excellence. *Drug misuse: opioid detoxification*. London: NICE; 2007.
15. Mattick RP, Breen C, Kimber J, Davoli M. Methadone maintenance therapy versus no opioid replacement therapy for opioid dependence. *Cochrane Database of Systematic Reviews* 2009;**3**. CD002209.
16. Mattick RP, Kimber J, Breen C, Davoli M. Buprenorphine maintenance versus placebo or methadone maintenance for opioid dependence. *Cochrane Database of Systematic Reviews* 2008;**2**. CD002207.
17. Fischer B, Cruz MF, Rehm J. Illicit opioid use and its key characteristics: a select overview and evidence from a Canadian Multisite Cohort of Illicit Opioid Users (OPICAN). *Canadian Journal of Psychiatry* 2006;**51**(10):624–34.
18. Bell JR, Butler B, Lawrance A, Batey R, Salmelainen P. Comparing overdose mortality associated with methadone and buprenorphine treatment. *Drug and Alcohol Dependence* 2009;**104**(1–2):73–7.
19. Reimer J, Verthein U, Karow A, Schäfer I, Naber D, Haasen C. Physical and mental health in severe opioid-dependent patients within a randomized controlled maintenance treatment trial. *Addiction* 2011;**106**:1647–55.
20. Pukrop R, Möller H-J, Steinmeyer EM. Quality of life in psychiatry: a systematic contribution to construct validation and the development of the integrative assessment tool "modular system for quality of life". *European Archives of Psychiatry and Clinical Neuroscience* 2000;**250**:120–32.
21. Musa R, Bakar AZA, Khan UA. Two-year outcomes of methadone maintenance therapy at a clinic in Malaysia. *Asia-Pacific Journal of Public Health* 2012;**24**(5):826–32.
22. Gossop M, Marsden J, Stewart D. *NTORS after five years (National Treatment Outcome Research Study): changes in substance use, health and criminal behaviour during the five years after intake*. London: National Addiction Centre; 2001.
23. Raisch DW, Campbell HM, Garnand DA, Jones MA, Sather MR, Naik R, et al. Health-related quality of life changes associated with buprenorphine treatment for opioid dependence. *Quality of Life Research* 2012;**21**:1177–83.
24. De Maeyer J, Vanderplasschen W, Camfield L, Vanheule S, Sabbe B, Broekaert E. A good quality of life under the influence of methadone: a qualitative study among opiate-dependent individuals. *International Journal of Nursing Studies* 2011;**48**:1244–57.
25. Driver and Vehicle Licensing Agency. *For medical practitioners. At a glance guide to the current medical standards of fitness to drive*. Swansea: DVLA; 2013.
26. Sinclair JMA, Burton A, Ashcroft R, Priebe S. Clinician and service user perceptions of implementing contingency management: a focus group study. *Drug and Alcohol Dependence* 2011;**119**:56–63.
27. Dutra L, Stathopoulou G, Basden SL, Leyro TM, Power MB, Otto MW. A meta-analytic review of psychosocial interventions for substance use disorders. *American Journal of Psychiatry* 2008;**165**:179–87.
28. Amato L, Minozzi S, Davoli M, Vecchi S, Ferri M, Mayet S. Psychosocial and pharmacological treatments versus pharmacological treatments for opioid detoxification. *Cochrane Database of Systematic Reviews* 2008;**4**. CD005031.
29. Andrade LF, Allesi SM, Petry NM. The impact of contingency management on quality of life among cocaine abusers with and without alcohol dependence. *The American Journal on Addictions* 2011;**21**:47–54.
30. DIP Strategic Communications Team. *Evidence of the impact of the Drug Interventions Programme – summaries and sources*. London: Home Office; 2008.
31. Home Office. *Drug Interventions Programme operational handbook*. London: The Stationary Office; 2011.
32. National Treatment Agency for Substance Misuse. *Audit and risk committee meeting on 10 February 2010*. London: NTA; 2010.
33. Whitehead SJ, Ali S. Health outcomes in economic evaluation: the QALY and utilities. *British Medical Bulletin* 2010;**96**:5–21.
34. Cleemput I, Neyt M, Thiry N, De Laet C, Leys M. Using threshold values for cost per quality-adjusted life-year gained in healthcare decisions. *International Journal of Technology Assessment in Health Care* 2011;**27**(1):71–6.
35. McCabe C, Claxton K, Culyer AJ. The NICE cost-effectiveness threshold: what it is and what that means. *PharmacoEconomics* 2008;**26**(9):733–44.
36. Connock M, Juarez-Garcia A, Jowett S, Frew E, Liu Z, Taylor RJ, et al. Methadone and buprenorphine for the management of opioid dependence: a systematic review and economic evaluation. *Health Technology Assessment* 2007;**11**(9):1–171.
37. Olmstead TA, Petry NM. The cost effectiveness of prize-based and voucher-based contingency management in a population of cocaine- or opioid-dependent outpatients. *Drug and Alcohol Dependence* 2009;**102**(1–3):108–15.
38. Olmstead TA, Cohen JP, Petry NM. Health-care services utilization in substance abusers receiving contingency management and standard care treatments. *Addiction* 2012;**107**:1462–70.
39. Ware JE, Kosinski M, Keller SD. A 12-item short-form health survey: construction of scales and preliminary tests of reliability and validity. *Medical Care* 1996;**34**(3):220–33.

40. Farrell G, Tilley N, Tseloni A, Mailley J. Explaining and sustaining the crime drop: clarifying the role of opportunity-related theories. *Crime Prevention and Community Safety* 2010;**12**:24–41.
41. UK Drug Policy Commission. *Charting new waters: delivering drug policy at a time of radical reform and financial austerity, April 2012*. London: UKDPC; 2012.
42. Department of Health. *Building recovery in communities: the transition to the new public health system*. London: The Stationary Office; 2012.
43. Department of Health. *Healthy lives, healthy people: update and way forward*. London: The Stationary Office; 2011.
44. Department of Health. *Improving outcomes and supporting transparency*. London: The Stationary Office; 2012.
45. Godfrey C, Stewart D, Gossop M. Economic analysis of costs and consequences of the treatment of drug misuse: 2-year outcome data from the National Treatment Outcome Research Study (NTORS). *Addiction* 2004;**99**:697–707.
46. Home Office. *Drug strategy 2010. Reducing demand, restricting supply, building recovery: supporting people to live a drug free life. Annual review – May 2012*. London: The Stationary Office; 2012.
47. Home Office. *Police and crime commissioners – Update*. London: The Stationary Office; 2011.